

Serial No. 10/821,102..... Page 9

IN THE DRAWINGS:

Please accept the attached Replacement Sheet. The attached sheets of drawings include changes to Figs. 1, 1A, 2A, 3 and 5. Figures 1, 1A, 3 and 5 have been relabeled to be consistent with the specification. In Figure 2A, "Prior Art" has been added.

Serial No. 10/821,102..... Page 10

REMARKS

Claims 1 – 17 are presently pending. In the above-identified Office Action, the Examiner rejected Claims 8 – 14 under 35 U.S.C. § 102(b) as being anticipated by Kober *et al.* ('216). Claim 9 was rejected under 35 U.S.C. § 112, second paragraph. Minor issues were noted in the Specification and Drawings and Claims 1 – 7 and 17 were allowed while Claims 15 and 16 were objected to.

The indication of allowed and allowable subject matter is gratefully acknowledged. For the reasons set forth more fully below, Applicant submits that the subject application properly presents claims allowable over the prior art. Accordingly, reconsideration, allowance and passage to issue are respectfully requested.

The dynamic weight generator of the present invention addresses the need in the art for a system or method for reducing the vulnerability of GPS to inadvertent and overt jamming and spoofing. The inventive generator includes a first memory for storing a PN code; a second memory for storing a plurality of weights, the second memory being coupled to the first memory whereby data output by the first memory is used to address data stored in the second memory; and a correlator for multiplying an input signal by data output by the second memory.

In the illustrative embodiment, the weights are finite impulse response correlation coefficients. The correlator includes two multipliers. The first of the multipliers is coupled to a source of an in-phase component of the input signal. The second of the multipliers is coupled to a source of a quadrature component of the input signal. The outputs of the multipliers are summed. In the illustrative application, the input signal is a GPS signal. For this application, the inventive teachings are implemented in a signal processing system adapted to receive a GPS signal and provide in-phase and quadrature signals in response thereto. The signal is filtered with a finite impulse response filter to provided weighted signals. The weighted signals are processed to generate nulling and beamsteering weights for the weighted signals. The weights may be used to equalize the received signals.

Serial No. 10/821,102..... Page 11

In a more specific implementation, the received signals are partitioned into space frequency adaptive processing bands and space-time adaptive processing is performed within the SFAP bands.

The invention is set forth in Claims of varying scope of which Claim 8 is illustrative. Claim 8 recites:

8. A signal processing system comprising:
first means for receiving a signal and providing in-phase and quadrature signals in response thereto;
second means filtering said in-phase and quadrature signals with dynamic weights to provided weighted signals;
and
third means for generating nulling and beam steering weights for said weighted signals. (Emphasis added.)

The prior art does not teach or render obvious the invention as set forth in Claim 8. That is, the prior art does not teach a signal processing system with means for generating nulling and beam steering weights for weighted in phase and quadrature signals.

In the above-identified Office Action, the Examiner rejected Claims 8 – 14 as being anticipated by Kober. Kober purports to teach a rake receiver for spread spectrum signal demodulation. The Examiner suggests that at col. 4, lines 11 – 37 Kober teaches means for generating nulling and beam steering weights. However, no where in the passage cited by the Examiner or elsewhere in the reference is a teaching with respect to means for generating nulling and beam steering weights for weighted in phase and quadrature signals as set forth in Claim 8.

Accordingly, Applicant respectfully submits that Claims 8 – 14 should be allowable as well.

As to the rejection of Claim 9 under 35 U.S.C. § 112 second paragraph, Applicant requests clarification as to the basis for the rejection inasmuch as Claim 8 makes reference to 'signals'. Hence, There is antecedent basis for 'said signals' in Claim 9. Clarification is requested.

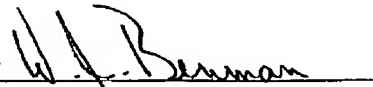
Serial No. 10/821,102..... Page 12

The objections noted by the Examiner with respect to the Drawings have been addressed by this Paper.

Hence, reconsideration, allowance and passage to issue are respectfully requested.

Respectfully submitted,
Paul H. Grobert *et al*

By


William J. Benman, Esq.
Attorney for Applicant
Attorney Reg. No. 29,014

Benman, Brown & Williams
2049 Century Park East
Suite 2740
Los Angeles, CA 90067

(310) 553-2400
(310) 553-2675 - facsimile